

What is Claimed is:

1. A fluid filter, comprising:

an outer casing;

a filter assembly received within the outer casing, comprising:

5 a plurality of corrugated filtering plates; and

10 a plurality of flat filtering plates alternated into said corrugated filtering plates to overlap with corrugated filtering plates with a 'Z' shaped manner so as to form a filter stack, wherein each of said corrugated filtering plates is reserved with two side plain edges and remaining portion of said corrugated filter plate is prepared corrugated ridge, wherein each of said corrugated filtering plates is respectively welded onto a pair of neighboring flat filtering plates at opposed edges, such that two sides of said filter stack are enclosed with Z shaped ending alternatively applied as fluid inlet and outlet in practice.

15 2. The fluid filter, as recited in claim 1, wherein said side plain edge is positioned to be align with a central portion of said corrugated ridge, or respectively aligned with an upper portion and a lower portion of said corrugated ridge.

3. The fluid filter, as recited in claim 1, wherein a height of each layer of said filter stack is ranged between 2-10mm and a crest interval L of the corrugated peaks is ranged between 4-20mm.

20 4. The fluid filter, as recited in claim 1, wherein two sides of said filter assembly are coated with sealant glue for separating with an inner surface of said outer casing.

5. A fluid filter, comprising:

an outer casing ;

a plurality multi-layer corrugated filtering rings;

a plurality of multi-layer flat filtering rings;

and a central tube ;

wherein an innermost layer of said flat filtering ring is welded onto said central
5 tube, an outermost layer of said flat filtering ring is welded onto an inner surface of said
outer casing, wherein said multi-layer corrugated filter rings are coaxially alternated
within said flat filtering rings and formed with a zigzag manner, wherein side edges of
each of said corrugated filtering rings are respectively welded onto neighboring flat
filtering rings so as to form a continuous filter core with 'Z' shaped side endings, wherein
10 two sides of said Z shaped side endings of said filter core are alternatively applied as
fluid inlet and fluid outlet in applications.

6. The fluid filter, as recited in claim 5, wherein each of said corrugated
filtering rings is reserved with two side plain edges and remaining portion of said
corrugated filtering rings is prepared corrugated ridge, said plain edge is sized between 3-
15 8mm.

7. The fluid filter, as recited in claim 5 or 6, wherein said flat filtering rings
is cylinder shaped.

8. The fluid filter, as recited in claim 7, wherein a height H of a corrugated
filtering ring/flat filtering ring combination is ranged between 2-10mm.

20 9. The fluid filter, as recited in claim 8, wherein a crest interval L between
corrugated peaks of said corrugated filtering rings is ranged between 4-20mm.